



PM  
10-6-88  
Jacksonville, FL

*file copy*

**ENVIRONMENTAL SCIENCE  
AND ENGINEERING, INC.**

AN **RSH** COMPANY

October 6, 1988  
87031-0000

**RECEIVED**

**OCT 7 1988**

C.H. Fancy, P.E., Deputy Chief  
Bureau of Air Quality Management  
Florida Department of Environmental Regulation **DER-BAQM**  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Subject: Permit No. AC56-141460  
Combined Cycle Gas Turbine  
Fort Pierce Utilities Authority  
Fort Pierce, Florida

Dear Mr. Fancy:

The enclosed letter was received from General Electric Company, vendor supplying the gas turbine for Fort Pierce Utilities Authority (FPUA). They bring three Specific Conditions of the subject permit to our attention. Two of the items are obvious typographical errors and should be corrected. These are:

- Specific Condition No. 3.e - "ASTM 1552" should read "ASTM D1552".
- Specific Condition No. 5 - "ratio of water to fuel" should read "ratio of steam to fuel".

The other item listed is not as readily apparent. General Electric contends that the formula listed in 40 CFR 60.335 for adjusting NO<sub>x</sub> emission levels measured by Reference Method 20 to ISO standard day conditions is in error in the Code of Federal Regulations (CFR) and, therefore, is in error in Specific Condition No. 3.g. in the permit. It is General Electric's contention that the formula as printed:

$$NO_x = (NO_{x_{obs}}) \left( \frac{P_{ref}}{P_{obs}} \right)^{0.5} e^{19(H_{obs} - 0.00633)} \left( \frac{T_{AMB}}{288^\circ K} \right)^{1.53}$$

should read:

$$NO_x = (NO_{x_{obs}}) \left( \frac{P_{ref}}{P_{obs}} \right)^{0.5} e^{19(H_{obs} - 0.00633)} \left( \frac{288^\circ K}{T_{AMB}} \right)^{1.53}$$



FILE COPY

GE Turbines

7 September 1988

ID NUMBER			
REYNOLDS, SMITH & HILLS			
ARCHITECTS-ENGINEERS-PLANNERS			
JACKSONVILLE FLORIDA			
DEPARTMENTAL CHECK			
DEPT	REVIEWER	DATE	INITIALS
ARCH			
STRUC			
MECH			
ELEC			
SITE			
PLAN			
FINAL DISPOSITION			
PROJ MGR			

Subject: Metric Constructors  
 Ft. Pierce, Fla.  
 GE Reqn. 340-000143  
 PO 86-508-100  
 Emissions Permit

Mr. LE Tandy  
 Construction Manager  
 Metric Constructors  
 Two South Executive Park  
 6135 Park Road  
 Charlotte, NC 28210-3294

In the process of reviewing the EPA Permit for the emissions test criteria, the Engineering Dept. noticed some problems. You may wish to bring these to RS&H's attention to have the permit corrected.

- Under Specific Condition 3.e., GE is interpreting "ASTM 1552" as meaning "ASTM D1552".
- In Specific Condition 3.g., the formula has one term inverted just as in the Federal Regulations. This long standing error has

$$\left( \frac{T_{AMB}}{288^{\circ}K} \right)^{1.53}$$

and it should be

$$\left( \frac{288^{\circ}K}{T_{AMB}} \right)^{1.53}$$

- In Specific Condition 5, "ratio of water to fuel" should read "ratio of steam to fuel".

VE Hoepfner  
 Contract Manager

cc: SF Ginter #36-605  
 BL Bailey #23-384B  
 RW Keith #53-401  
 J. Lowe Charlotte

